

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-30. (Canceled)

31. (New) An industrial automation system comprising:

a first industrial automation network device for performing a first industrial automation function and located at a first physical location within the industrial automation system, the first industrial automation network device comprising a first industrial automation software program configured to perform the first industrial automation function which is directly associated with and necessitated by the first physical location of the industrial automation system, and comprising a first device address, the first industrial automation network device being associated with a first GPS physical site locator for identifying the first physical location and for generating a first location data representative of the first physical location;

a second industrial automation network device for performing a second industrial automation function and located at a second physical location within the industrial automation system, the second industrial automation network device comprising a second industrial automation software program configured to perform the second industrial automation function which is directly associated with and necessitated by the second physical location of the industrial automation system, and comprising a second device address, the second industrial automation network device being associated with a second GPS physical site locator for identifying the second physical location and for generating a second location data representative of the second physical location; and,

a controlling workstation comprising mapping software for receiving, mapping, and storing the first device address and the first physical location data, and the second device address and the second physical location data, respectively, the controlling workstation further storing the first industrial automation software program for backup purposes.

32. (New) The system of claim 31, wherein the first industrial automation network device further comprises first configuration data, wherein the second industrial automation network device further comprises second configuration data, and wherein the controlling workstation

receives and stores the first and second configuration data with the first and second industrial automation software programs, respectively.

33. (New) The system of claim 32, wherein the first configuration information is downloaded from the controlling workstation to the first industrial automation network device upon a failure or replacement of the first industrial automation device.

34. (New) The system of claim 31, wherein the first industrial automation software program is downloaded from the controlling workstation to the first industrial automation network device upon a failure or replacement of the first industrial automation network device.

35. (New) The system of claim 31, wherein the first device address and the first physical location data, and the second device address and the second physical location data, respectively, are received in an RARP message.

36. (New) The system of claim 31, wherein the first industrial automation function comprises monitoring and/or controlling water usage, power usage, temperature, flow rate, a lighting condition, and/or the state of a metal surface polisher.

37. (New) The system of claim 31, wherein the second industrial automation function comprises monitoring and/or controlling water usage, power usage, temperature, flow rate, a lighting condition, and/or the state of a metal surface polisher.

38. (New) The system of claim 31, wherein the first device address is a MAC address or an IP address, and wherein the second device address is a MAC address or an IP address.

39. (New) The system of claim 31, wherein the first and second industrial automation network devices are an I/O device or a programmable logic controller.

40. (New) The system of claim 31, wherein the controlling workstation is further provided for storing the second industrial automation software program for backup purposes.

41. (New) An industrial automation system comprising:

a first industrial automation network device for performing a first industrial automation function and located at a first physical location within the industrial automation system, the first industrial automation network device comprising a first industrial automation software program configured to perform the first industrial automation function which is directly associated with and necessitated by the first physical location of the industrial automation system, and comprising a first device address, the first industrial automation network device being associated

with a first GPS physical site locator for identifying the first physical location and for generating a first location data representative of the first physical location, the first industrial automation network device further being located within a first area;

a second industrial automation network device for performing a second industrial automation function and located at a second physical location within the industrial automation system, the second industrial automation network device comprising a second industrial automation software program configured to perform the second industrial automation function which is directly associated with and necessitated by the second physical location of the industrial automation system, and comprising a second device address, the second industrial automation network device being associated with a second GPS physical site locator for identifying the second physical location and for generating a second location data representative of the second physical location; the second industrial automation network device further being located within the first area;

a third industrial automation network device for performing a third industrial automation function and located at a third physical location within the industrial automation system, the third industrial automation network device comprising a third industrial automation software program configured to perform the third industrial automation function which is directly associated with and necessitated by the third physical location of the industrial automation system, and comprising a third device address, the third industrial automation network device being associated with a third GPS physical site locator for identifying the third physical location and for generating a third location data representative of the third physical location, the third industrial automation network device further being located within a second area;

a fourth industrial automation network device for performing a fourth industrial automation function and located at a fourth physical location within the industrial automation system, the fourth industrial automation network device comprising a fourth industrial automation software program configured to perform the fourth industrial automation function which is directly associated with and necessitated by the fourth physical location of the industrial automation system, and comprising a fourth device address, the fourth industrial automation network device being associated with a fourth GPS physical site locator for identifying the fourth physical location and for generating a fourth location data representative of the fourth physical

location; the fourth industrial automation network device further being located within the second area; and,

a master controller comprising software for storing mapping data comprising the first device address and the second device address both mapped to the first area, and the third device address and the fourth device address both mapped to the second area.

42. (New) The system of claim 41, wherein the first and second location data is the same.

43. (New) The system of claim 41, wherein the third and fourth location data is the same.

44. (New) The system of claim 41, wherein the first and second GPS physical site locators are the same device.

45. (New) The system of claim 41, wherein the first and second automation functions are the same.

46. (New) The system of claim 41, wherein the first and third automation functions are the same.

47. (New) The system of claim 41 further comprising a controlling workstation comprising mapping software for receiving, mapping, and storing the first device address and the first physical location data, and the second device address and the second physical location data, respectively, the controlling workstation further storing the first industrial automation software program for backup purposes.

48. (New) The system of claim 41, wherein the first industrial automation network device further comprises first configuration data, wherein the second industrial automation network device further comprises second configuration data, and wherein the controlling workstation receives and stores the first and second configuration data with the first and second industrial automation software programs, respectively.

49. (New) The system of claim 48, wherein the first configuration data is downloaded from the controlling workstation to the first industrial automation network device upon a failure or replacement of the first industrial automation device.

50. (New) The system of claim 48, wherein the first automation software program is downloaded from the controlling workstation to the first industrial automation network device upon a failure or replacement of the first industrial automation network device.

51. (New) The system of claim 41, wherein the first device address and the first physical location data, and the second device address and the second physical location data, respectively, are received in an RARP message.
52. (New) The system of claim 41, wherein the first, second, third, and fourth industrial automation functions comprise monitoring and/or controlling water usage, power usage, temperature, flow rate, a lighting condition, and/or the state of a metal surface polisher.
53. (New) The system of claim 41, wherein the first, second, third, and fourth device addresses are MAC addresses and/or IP addresses.
54. (New) The system of claim 41, wherein the first, second, third, and fourth industrial automation network devices are I/O devices and/or programmable logic controllers.
55. (New) The system of claim 41, wherein the controlling workstation is further provided for storing the second, third, and fourth industrial automation software programs for backup purposes.